

REMARKS

Applicants appreciate the courtesy extended by the Examiner of record and his supervisor in granting a personal interview with their representative on March 13, 2003. In accordance with MPEP § 713.04, applicants make of record the substance of the interview by way of remarks hereinbelow.

Claims 1 and 2 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Applicants respectfully traverse this rejection.

The Office Action implies that beginning a claim phrase with “wherein” renders the claim indefinite, as if the “wherein” phrase cannot describe structure and therefore not enable the claim to distinguish the invention from the prior art. However, the “wherein” phrases of both claims 1 and 2 clearly describe structure, for example, the thickness of the return plate.

Additionally, a claim does not become indefinite under 35 U.S.C. § 112, second paragraph, just because a part of the claim may be taught or suggested by prior art.¹ (Under such reasoning, claims 1 and 2 could be deemed indefinite if, for example, prior art were identified that taught only a “conductive anode base holding the anode.”)

As support for the indefiniteness rejection, the Office Action provides a citation to *In re Mason*, 44 CCPA 937, 244 F.2d 733, 114 USPQ 127 (1957). The Office Action does not indicate the particular part of *In re Mason* relied upon. Applicants conjecture that the rejection relies on the

¹If the claim, *as a whole*, is taught or suggested by prior art, it may be rejected under 35 U.S.C. §§ 102 or 103. However, this would not make the claim indefinite under 35 U.S.C. § 112, second paragraph.

following (from 44 CCPA at 940, 244 F.2d at 735):

Claims 10 and 11 also include a functional statement as to what happens when one of the web portions is torn transversely along a tearing line. That statement, however, does not define any structure and accordingly cannot serve to distinguish claims 10 and 11, which are not process claims, from the reference.

This excerpt does not mean that *any* phrase beginning with “wherein” cannot define structure. It only means that *some* phrases of such phrases, i.e., those phrases resembling claims 10 and 11 referenced in the court opinion, cannot define structure. As explained above, applicants’ claims 1 and 2 define structure with their “wherein” phrases.

Most importantly, however, *In re Mason* discusses a rejection based on prior art. The court opinion does not say that a claim becomes indefinite under 35 U.S.C. § 112, second paragraph, just because some of the features described therein may be taught or suggested by prior art.

During the March 13, 2003 personal interview, the Examiner’s supervisor appeared persuaded that the recitation of “wherein” in the claims is acceptable, although applicants acknowledge that no such statement was made of record in the Examiner’s Interview Summary, form PTO-413.

Applicants also respectfully disagree that the claims are unclear as to how a return plate can be thicker than an entering depth of the high frequency current. In the October 2, 2002 Preliminary Amendment, on pages 2 and 3, applicants explained how such recitation is definite. However, the Office Action does not indicate any supposed fallacies in the explanation. Applicants request that, if the Examiner believes there are such fallacies, he should explain them in the next correspondence

if the indefiniteness rejection is ultimately maintained. Otherwise, the rejection should be withdrawn.

Accordingly, applicants now solicit the withdrawal of the indefiniteness rejection of claims 1 and 2 under 35 U.S.C. § 112, second paragraph.

Claims 1 and 2 stand rejected under 35 U.S.C. § 103 as obvious over *Itakura* (JP 1-268078

A). Applicants respectfully traverse this rejection.

As stated in claims 1 and 2, the structure and apparatus described therein include:

a high voltage power source supplying a high frequency current between the anode and the cathode;

wherein said high frequency current includes frequencies which are more than 1 MHz, and said return plate is thicker than *double* an entering depth of the high frequency current and restrainable from vibrating the return plate due to the laser gas flow [*emphasis added*].

Applicants explained in the July 31, 2002 Response, page 4, that *Itakura* does not teach or suggest these features (except for the return plate's double thickness feature now claimed). The November 19, 2002 Office Action responds that applicants' specification, on page 2, lines 5-11, explains that *Itakura* teaches a high voltage power source supplying a high frequency current between the anode and the cathode. However, the cited description only states that a high voltage power source supplies a current, the description does not indicate the frequency of the current. Therefore, the *Itakura* teaching cited above does not support the rejection.

Additionally, the cited description of *Itakura* says nothing about the return plate being thicker than the entering depth of the high frequency current. That is, the Office Action provides no

explanation of why the rejection was maintained after this feature was added to the claims.

Applicants' representative discussed this issue in the March 13, 2003 personal interview. The Examiners elaborated that a particular claimed thickness of the return plate would not make the claims non-obvious. The rationale seemed² to be that one skilled in the art was familiar with the skin-depth effect and would make a conducting element as thick as necessary to provide as much cross-sectional area as the high frequency current would use. Therefore, a return plate would likely be thicker than double the skin depth.

Nonetheless, no such teaching of such a return plate is made of record. Applicants explains on page 11 of their specification that in operation high frequency current enters from both the front *and* back surfaces of the sheet-like return plate. Accordingly, applicants' return plate is at least *double* the entering depth. Such a feature is not taught or suggested in *Itakura*.

Unless a prior art teaching or suggestion is provided to modify the *Itakura* return plate such that it would have the claimed thickness, or unless a citation to an appropriate principle in the MPEP or a court opinion is provided which describes why such a modification would have been obvious, applicants respectfully submit that the obviousness rejection of claims 1 and 2 under 35 U.S.C. § 103(a) should be withdrawn.

In view of the amendments and remarks above, applicants now submit that the entire application is in condition for allowance. Accordingly, a Notice of Allowability is hereby requested. If for any reason it is felt that this application is not now in condition for allowance, the Examiner

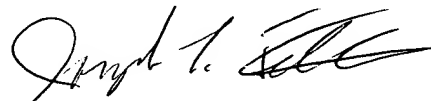
²Such explanation was not provided in the Examiner's Interview Summary, form PTO-413, and no Office Action includes this explanation.

is invited to contact applicants' undersigned attorney at the telephone number indicated below to arrange for disposition of this case.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version of Amendments with Markings to Show Changes Made."

In the event that this paper is not timely filed, applicants petition for an appropriate extension of time. The fees for such an extension, or any other fees which may be due, may be charged to Deposit Account No. 01-2340.

Respectfully submitted,
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PATENT TRADEMARK OFFICE

Enclosures: Version of Amendments with Markings to Show Changes Made
Petition for Extension of Time

VERSION OF AMENDMENTS WITH MARKINGS TO SHOW CHANGES MADE**CLAIMS:**

1. (Twice Amended) A discharge electrodes connecting structure for a laser apparatus comprising:

a pair of anode and cathode provided within a laser chamber for sealing a laser gas in an opposing manner, generating a discharge so as to excite a laser gas flowing therebetween and oscillating a laser beam;

a conductive anode base holding the anode;

an insulative cathode base holding the cathode;

a return plate electrically connecting the anode base to said laser chamber so as to supply a current to the anode and having a thickness of equal to or more than 100 μm and equal to or less than 500 μm ; and

a high voltage power source supplying a high frequency current between the anode and the cathode;

wherein said high frequency current includes frequencies which are more than 1 MHz, and said return plate is thicker than double an entering depth of the high frequency current and restrainable from vibrating the return plate due to the laser gas flow.

2. (Twice Amended) A laser apparatus comprising:

a laser chamber sealing a laser gas;

discharge electrodes constituted by a pair of anode and cathode provided within the laser chamber in an opposing manner, generating a discharge so as to excite a laser gas flowing therebetween and oscillating a laser beam;

a conductive anode base holding the anode;

an insulative cathode base holding the cathode;

a return plate electrically connecting the anode base to said laser chamber so as to supply a

current to the anode; and

a high voltage power source supplying a high frequency current between the anode and the cathode;

wherein said high frequency current includes frequencies which are more than 1 MHz[.], and said return plate is thicker than double an entering depth of the high frequency current and restrainable from vibrating the return plate due to the laser gas flow;

wherein a thickness of the return plate is set to be equal to or more than 100 μm and equal to or less than 500 μm , and the return plate is arranged substantially in parallel to the laser gas flow between said discharge electrodes.